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A CASE REPORT OF CHOROIDAL MALIGNANT MELANOMA

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Abstract : Malignant melanoma of the choroid is the most common primary intra ocular tumour disease in adults in USA. It is relatively uncommon in blacks. It is most often found in sixth decade and very rare below 20 years. Median age is about 55 years.

Keyword : Choroidal melanoma, Neovascular glaucoma, Bullous retinal detachment, Enucleation of globe.

INTRODUCTION :

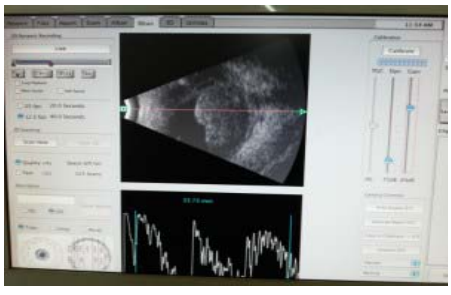
In whites, more than 90 percent of eye cancers are ocular melanomas and a great majority are uveal melanomas. It is associated with ocular and oculodermal melanoses (nevus of Ota) and with light iris. The usual clinical presentation are blurring of vision, field defects, floaters, photopsia, pain (due to secondary glaucoma). Pathology – The tumour arises from iris, choroid, ciliary body and associated with variable pigment content from amelanotic to deeply pigmented types. There are two types of growth patterns seen. Focal and Diffuse.

1. Focal type is common. Early lesions are confined to the uvea. As the tumour grows, it can penetrate through the Bruch membrane and produce a mushroom shaped mass.
2. Diffuse type is Rare and aggressive. It involves a larger area of uvea and resulting in extra scleral extension frequently. Histologically, the cell types in choroidal melanoma are Spindle A, Spindle B, Epithelioid, Mixed, Necrotic (Modified Callender's classification).

CASE REPORT

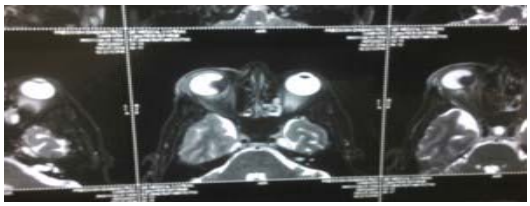
A 60 years old male, barber by occupation presented to our hospital with chief complaints of pain in the right eye for 2 months and defective vision RE for 6 months. No associated history of systemic illness. On ocular examination: Right eye visual acuity -Perception of light present. Projection of rays were present in all 4 quadrants, Intra ocular pressure measured 59.1 mmhg by Schiotz tonometer. Lids - Edema present, Extra ocular movements-full, Conjunctiva - Circumcorneal congestion and chemosis present, Cornea-Epithelial edema present, Iris pigments seen on back of the cornea, Iris – Colour pattern altered, 360 degree neo vascularisation seen around the pupillary border in the iris stroma. Anterior chamber was shallow with cells 3+, flare 3+, Pupil was 4 mm, not reacting to light, Lens shows immature cataract with iris pigments over the anterior lens capsule. Examination of left eye - visual acuity of 6/12 NIP , IOP of 14.6 mmhg by Schiotz tonometer. Lids, conjunctiva, conea-Normal. Anterior chamber-normal depth. Iris-Colour pattern - Normal.Pupil-Reacting to light. Lens- Immature cataract+. Fundus examination of Right eye – No view due to corneal edema. Left eye - Media mildly hazy due to lens changes. Disc and vessels normal. Macula-FR present. (Fig.1&2)

(Fig 1 & 2) Clinical picture showing Right eye lid edema, conjunctival congestion, chemosis, corneal edema and nonreactive pupil

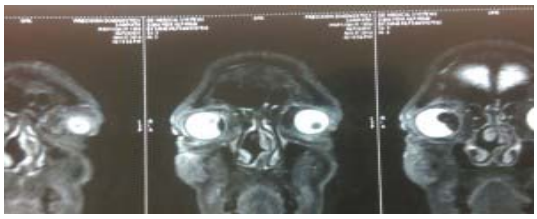


(Fig .3)B Scan photograph of the right eye showing 14.2x 20.2 mm endophytic growth seen arising from the superior portion of retina adjacent to optic disc , with features of high surface reflectivity, acoustic hollowing and choroidal excavation. Shallow retinal detachment also seen.

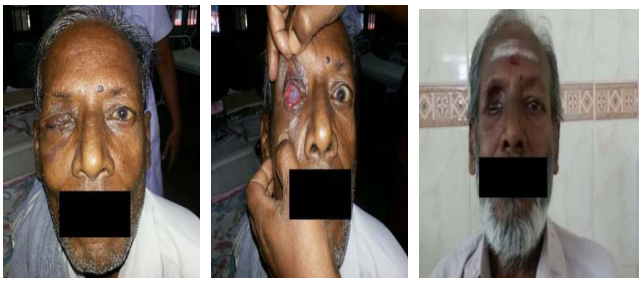
B scan RE shows14.2x 20.2 mm endophytic growth seen arising from the superior portion of retina adjacent to optic disc , with features of high surface reflectivity, acoustic hollowing and choroidal excavation. Shallow retinal detachment also seen.A scan shows a sharp decay of spikes indicating the lesion is densely homogenous (Fig. 3). USG abdomen reveals normal study. No evidence of distant metasasis.



(Fig 4 & 5)MRI Orbit showing well defined lobulated intra ocular lesion in posteromedial aspect of right orbit

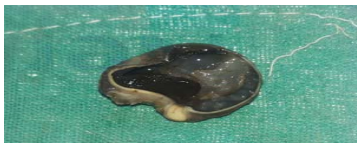


MRI orbit shows a welldefined lobulated intra ocular lesion in posteromedial aspect of right orbit suggestive of melanoma. (Fig.4& 5). Initially patient was treated with antiglaucoma medications to lower Intra ocular pressure to give symptomatic relief from pain. The TNM grading of this patient is T3b No Mo. (T3b - Tumour size of Category 3 with ciliary body involvement. Category 3- Tumour size more than 8 mm in apical height, basal diameter more than 16 mm. No- No regional lymph node metastasis. Mo- no distant metastasis). After obtaining medical control of IOP . Opinion obtained from two chief ophthalmologists risk was explained to the patient's family members and to him. Consent obtained from patient and his family members, was proceeded with Right eye enucleation considering the size of the tumour . Specimen was sent for histopathological examination.

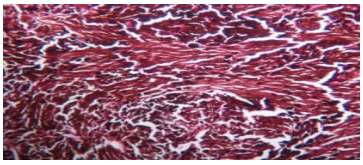


(Fig 6,7 & 8)Clinical picture showing early post operative and late post operative appearance of the patient.

Post operatively patient was treated with systemic antibiotics for five days.Pad and bandage was applied for five days. There was no bleeding, oozing, discharge from the wound bed seen. Topically patient was treated with Moxifloxacin eye drops and Moxifloxacin eye ointment. Then patient was started with oral antibiotics for two weeks. (fig 6,7 & 8)post operative period was uneventful and the socket was healthy.



(Fig9 ,10&11) Clinical picture showing macroscopic appearance and microscopic appearance of Choroidal melanoma and histo pathological report



Macroscopically cut section of the received specimen shows blackish mass occupying the entire vitreous cavity. Microscopically, section shows sclera, choroid and fragments of retina. An infiltrative neoplasm is seen arising from the choroid and occupying nearly the entire vitreous cavity. The tumour cells are spindle shaped with intra cytoplasmic melanin. The cells are arranged in sheets and fascicles. Nucleoli are hyperchromatic. Lens appears normal. Optic nerve-Free from invasion. Impression : Malignant melanoma of the Choroid.(Fig 9 ,10&11) HPE results confirmed the diagnosis of choroidal malignant melanoma. Hence patient was referred to oncologist for further management with radiotherapy. Patient was treated with 10 sittings of radiotherapy. He is further planned for socket reconstrution at a later date.

DISCUSSION

Choroidal melanoma has an overall incidence of 5 – 7.5 per million per year. It is the most common primary intraocular malignancy in adults. Adverse prognostic factors include large tumours, with extra scleral extension anteriorly situated tumours involving the ciliary body, local tumour recurrence after conservative treatment and large numbers of epitheloid cells, long and wide nuclei, multiple nucleoli. Clinically Patients present around 60 years and may be asymptomatic, if it arises in the periphery or presents with decreased visual acuity, blurring, metamorphopsia, visual field defects, floaters or photopsia. Clinical examination reveals a solitary elevated sub retinal dome shaped mass which may be pigmented or amelanotic. 60% of tumours are located within 3 mm of optic disc or fovea. Lesion may also associated with exudative retinal detachment which later becomes bullous, choroidal folds, intra ocular inflammation, haemorrhage, rubeosis iridis, secondary glaucoma and cataract. Various investigation modalities are used. Fluorescein angiography shows intrinsic tumour circulation and late diffuse leakage and staining. Ultrasound is useful in measuring tumour dimensions. The characteristic findings are internal homogeneity, choroidal excavation, and orbital shadowing. Collar stud configuration is pathognomonic. MRI and ICGA is also useful. Biopsy is confirmatory.

Treatment depends on following factors –Size, Location and extent of tumour with effect on vision, State of the fellow eye, general health and age of the patient. Brachytherapy (episcleral plaque radiotherapy) with ruthenium-106 or an iodine -125 applicator is indicated in tumours less than 20 mm size. External beam radiotherapy is indicated in large size tumours or posteriorly located tumours which are unsuitable for brachytherapy. Transpupillary thermotherapy is indicated in small tumours when radiotherapy is inappropriate and unsuitable. Transscleral choroidectomy is indicated in tumours too thick for radiotherapy and less than 16 mm size. Enucleation is indicated in large tumour size > 16 mm basal diameter or > 10 mm apical height, optic disc invasion, extensive involvement of the ciliary body or angle, irreversible loss of useful vision Exentration or debulking with chemotherapy and radiotherapy is required at the stage of extra ocular spread. Palliative therapy with chemotherapy and immunotherapy may be of some use in prolonging life of the patients with distant metastasis. (Fig. 8,9 & 10)

A stitch in time saves nine. Early treatment rather than watchful waiting might better prevent metastatic death. All patients should be followed up periodically to assess any recurrences and metastasis.

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